



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/522,700

01/27/2005

Donald Horton

020512.0007US

1881

34284

7590

12/23/2005

ROBERT D. FISH

RUTAN & TUCKER LLP

611 ANTON BLVD 14TH FLOOR

COSTA MESA, CA 92626-1931

EXAMINER

FRIEDHOFFER, MICHAEL A

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/522,700	Applicant(s) HORTON ET AL.	
	Examiner Michael A. Friedhofer	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/27/05</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the detent subassembly being housed within the upper portion of the bushing and that a groove in the bushing engages the extrusion on the detent sub-assembly for preventing rotation of the sub-assembly in relation to the bushing must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson.

Robinson discloses in figures 1-5 a panel mounted rotary switch including a bushing formed by lower portion or housing 23 and upper portion or threaded bushing 28; and a detent sub-assembly 16 housed in the bushing in planar relation to the panel. The bushing extends from beneath the panel to above the panel. The detent sub-assembly is independent of the knob. The bushing is prevented from rotation relative to the panel via the stop pin on top of the lower portion of the bushing as seen in figure 1. The switch includes a shaft 18 that couples a knob (not shown) on the user's side with an electrical contact beneath the panel. The detent sub-assembly 16 is prevented from rotational movement by an engagement formed by the extrusion 40 cooperating with the groove 42 formed in the bushing.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2832

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Nation et al.

Robinson discloses all of the claimed limitations with the exception of the detent-sub-assembly being housed in the upper portion of the bushing.

Nation et al teaches a detent assembly or indexing assembly formed by elements 38,39, and 42 within the upper portion of the bushing.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Nation et al to Robinson to form the bushing such that the detent sub-assembly is housed within the upper portion because this is for the purpose of reducing the depth of switch thereby reducing the space required to house the switch.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Nation et al as applied to claims 1-6 above, and further in view of Rao et al.

Robinson as modified by Nation et al teaches all of the claimed limitations with the exception of the upper portion of the bushing having a flat side that cooperates with a d shaped opening in the panel to prevent rotational movement.

Rao et al teaches a panel mounted rotary switch in which the bushing may have a flat side for cooperating with a corresponding shape in the panel for preventing rotation of the bushing and switch.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Rao et al to Robinson as modified by Nation et al to form the bushing as having a flat side for engaging with a d-shaped opening in the panel because this would be for the purpose of further insuring that the bushing will not rotate relative to the housing reducing the possibility of mis-operation.

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson as modified by Nation et al as applied to claim 1-6, 8, and 9 above, and further in view of Garcia and Lockard.

Robinson as modified by Nation et al teaches all of the claimed limitations with the exception of the detent sub-assembly utilizing only one spring and at least one ball to contact rotor cams and that a plurality of printed circuit boards may be connected to the switch.

Lockard teaches a panel mounted rotary switch in which the detent assembly is formed in the lower portion of the bushing and operates radially with respect to the axis of the shaft and that multiple circuit boards may be utilized to operate a plurality of switches via a single shaft as shown in figures 7 and 10.

Garcia teaches that the detent sub-assembly may utilize a single spring and at least one ball for engaging the rotor cams.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Lockard and Garcia to Robinson as modified by Nation et al to utilize a detent sub-assembly in which the cams are engaged radially via balls biased by a spring and that multiple switches may be operated utilized stacked

circuit boards because the purpose of the radially extending cams is for the continued reduction in the overall depth of the switch in which a spring and the balls are well known as a method for engaging the cams and the plurality of circuit boards allows for the reduction in the size of the panel by utilizing a single shaft to operate a plurality of switches.

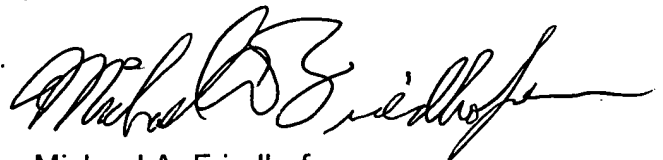
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kolb, Rose, Hung, and Kawasaki et al teach various panel mounted rotary switch structures utilizing various detent assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Friedhofer whose telephone number is 571-272-1992. The examiner can normally be reached on Mon-Fri 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Michael A. Friedhofer", with a long horizontal flourish extending to the right.

Michael A. Friedhofer
Primary Examiner
Art Unit 2832

maf